

ABB
ABB

Archives of Biochemistry and Biophysics

ABB
ABB
ABB

Volume 360, 1998



ACADEMIC PRESS

Copyright © 1998 by Academic Press

All Rights Reserved

No part of this publication may be reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopy, recording, or any information storage and retrieval system, without permission in writing from the Publisher. *Exceptions:* It is the policy of Academic Press that authors need not obtain permission in the following cases only: (1) to use their original figures or tables in their future works; (2) to make copies of their papers for use in their classroom teaching; and (3) to include their papers as part of their dissertations.

The appearance of the code at the bottom of the first page of an article in this journal indicates the Publisher's consent that copies of the article may be made for personal or internal use, or for the personal or internal use of specific clients. This consent is given on the condition, however, that the copier pay the stated per copy fee through the Copyright Clearance Center, Inc. (222 Rosewood Drive, Danvers, Massachusetts 01923), for copying beyond that permitted by Sections 107 or 108 of the U. S. Copyright Law. This consent does not extend to other kinds of copying, such as copying for general distribution, for advertising or promotional purposes, for creating new collective works, or for resale. Copy fees for pre-1998 articles are as shown on the article title pages; if no fee code appears on the title page, the copy fee is the same as for current articles.

0003-9861/98 \$25.00

MADE IN THE UNITED STATES OF AMERICA

This journal is printed on acid-free paper.



CONTENTS OF VOLUME 360

Number 1, December 1, 1998

BIOLOGICAL OXIDATIONS: FREE RADICALS, NITRIC OXIDE, ANTIOXIDANTS, AND P450 REACTIONS

- Cloning, Sequencing, and Tissue Expression of CYP3A27, a New Member of the CYP3A Subfamily from Embryonic and Adult Rainbow Trout Livers
Su-Jun Lee, Jun-Lan Wang-Buhler, Ismet Cok, Tae-Shick Yu, Yea-Huey Yang, Cristobal L. Miranda, John Lech, and Donald R. Buhler 53
- Involvement of Hepatic Aldehyde Oxidase in Conversion of 1-Methyl-4-phenyl-2,3-dihydropyridinium (MPDP⁺) to 1-Methyl-4-phenyl-5,6-dihydro-2-pyridone
Shin'ichi Yoshihara and Shigeru Ohta 93
- Concentration Dependence of Prooxidant and Antioxidant Properties of Catecholestrogens
Constantine S. A. Markides, Deodutta Roy, and Joachim G. Liehr 105
- Antioxidant Efficacy of Phytoestrogens in Chemical and Biological Model Systems
Julie H. Mitchell, Peter T. Gardner, Donald B. McPhail, Philip C. Morrice, Andrew R. Collins, and Garry G. Duthie 142

ENZYME STRUCTURE AND MECHANISMS; CELLULAR REGULATION; PHOSPHORYLATION AND DEPHOSPHORYLATION

- Molecular Cloning of Two Genes for β -D-Glucosidase in *Bacillus* sp. GL1 and Identification of One as a Gellan-Degrading Enzyme
Wataru Hashimoto, Hikaru Miki, Hirokazu Nankai, Nobuyuki Sato, Shigeyuki Kawai, and Kousaku Murata 1
- Conformational Features of a Truncated Staphylococcal Nuclease R (SNR135) and Their Implications for Catalysis
Bo Zhou and Guo-Zhong Jing 33
- Regulation of Nitric Oxide Synthase Induction by Iron and Glutathione in Asbestos-Treated Human Lung Epithelial Cells
Sun-Hee Park and Ann E. Aust 47
- Partial Characterization of the Active Site Human Platelet cAMP Phosphodiesterase, PDE3A, by Site-Directed Mutagenesis
Peter P. Cheung, L. Yu, Hong Zhang, and Robert W. Colman 99
- Arginine Residue 384 at the Catalytic Center Is Important for Branching Enzyme II from Maize Endosperm
Nathalie Libessart and Jack Preiss 135

GLYCOCONJUGATES AND OLIGOSACCHARIDES; PROTEOGLYCANS AND EXTRACELLULAR MATRICES

- Stabilization against Thermal Inactivation Promoted by Sugars on Enzyme Structure and Function: Why Is Trehalose More Effective Than Other Sugars?
Mauro Sola-Penna and José Roberto Meyer-Fernandes 10
- Cloning and Expression of cDNA for a Human Sia α 2,3Gal β 1,4GlcNA: α 2,8-Sialyltransferase (hST8Sia III)
Young-Choon Lee, Yeon-Jeong Kim, Ki-Young Lee, Kyoung-Sook Kim, Bang-Ul Kim, Hee-Nam Kim, Cheorl-Ho Kim, and Su-Il Do 41

LIPIDS, LIPID MEDIATORS, AND GLYCOLIPIDS

- Induction of Differentiation in Human Promyelocytic Leukemia Cell Line HL60 by a New Type of Polyenes, Falconensone A and Its Derivatives
Noriko Takahashi, Akiyo Iwahori, Ken-ichi Kawai, and Tetsuya Fukui 113

PLANT BIOCHEMISTRY AND MOLECULAR BIOLOGY

- Cloning and Functional Expression of a cDNA Encoding Geranylgeranyl Diphosphate Synthase from *Taxus canadensis* and Assessment of the Role of this Prenyltransferase in Cells Induced for Taxol Production
Jerry Hefner, Raymond E. B. Ketchum, and Rodney Croteau 62

PROTEIN STRUCTURE AND FUNCTION; PROTEASES, PROTEIN TURNOVER, AND POST-TRANSLATIONAL PROCESSING

Glucose Controls Cathepsin Expression in Ras-Transformed Fibroblasts	Cécile Tournu, Alain Obled, Marie-Paule Roux, Christiane Deval, Marc Ferrara, and Daniel M. Béchét	15
Secondary Structure of Antifreeze Proteins from Overwintering Larvae of the Beetle <i>Dendroides canadensis</i>	Ning Li, Brent S. Kendrick, Mark C. Manning, John F. Carpenter, and John G. Duman	25
Hexagonal Bilayer Structuring Activity of Linker Chains of an Annelid Giant Hemoglobin from the Polychaete <i>Perinereis aibuhitensis</i>	Toshio Gotoh, Toshiya Sano, Akihiro Shibuya, Mariko Yamaki, Kiyohiro Imai, and Satoshi Ebina	75
Oligosaccharide and Polypeptide Homology of Lupin (<i>Lupinus luteus</i> L.) Acid Phosphatase Subunits	Mariusz Olczak and Wiesław Wątorok	85
Effects of Additives on the Stability of Recombinant Human Factor XIII during Freeze-Drying and Storage in the Dried Solid	Lotte Kreilgaard, Sven Frokjaer, James M. Flink, Theodore W. Randolph, and John F. Carpenter	121

Number 2, December 15, 1998

BIOLOGICAL OXIDATIONS: FREE RADICALS, NITRIC OXIDE, ANTIOXIDANTS, AND P450 REACTIONS

NADPH Oxidase Activity and Cytochrome b_{558} Content of Human Epstein-Barr-Virus-Transformed B Lymphocytes Correlate with Expression of Genes Encoding Components of the Oxidase System	Antonio Condino-Neto and Peter E. Newburger	158
Fluorescent Labeling of the Leukocyte NADPH Oxidase Subunit p47 ^{phox} : Evidence for Amphiphile-Induced Conformational Changes	Hee-Sae Park and Jeen-Woo Park	165
Glyceraldehyde-3-Phosphate Dehydrogenase Inactivation by Peroxynitrite	José M. Souza and Rafael Radi	187
Kinetics of Mn^{3+} -Oxalate Formation and Decay in Reactions Catalyzed by Manganese Peroxidase of <i>Ceriporiopsis subvermispora</i>	Ulises Urzúa, Philip J. Kersten, and Rafael Vicuña	215
2-Chloro-1,4-dimethoxybenzene Cation Radical: Formation and Role in the Lignin Peroxidase Oxidation of Anisyl Alcohol	Pauline J. M. Teunissen, Dawei Sheng, G. Vijay Bhasker Reddy, Pierre Moënné-Loccoz, Jim A. Field, and Michael H. Gold	233

ENZYME STRUCTURE AND MECHANISMS; CELLULAR REGULATION; PHOSPHORYLATION AND DEPHOSPHORYLATION

Changes in Magnesium Content and Subcellular Distribution during Retinoic Acid-Induced Differentiation of HL60 Cells	A. Di Francesco, R. W. Desnoyer, V. Covacci, F. I. Wolf, A. Romani, A. Cittadini, and M. Bond	149
Effect of NADH-X on Cytosolic Glycerol-3-phosphate Dehydrogenase	Prakash Prabhakar, José I. Laboy, Jianbo Wang, Tatyana Budker, Zafeer Z. Din, Michael Chobanian, and Leonard A. Fahien	195
Protein Phosphatase 1 Catalytic Subunit Isoforms from Alfalfa: Biochemical Characterization and cDNA Cloning	Emese Vissi, Éva Csordás Tóth, Izabella Kovács, Zoltán Magyar, Gábor V. Horváth, Péter Bagossi, Pál Gergely, Dénes Dudits, and Viktor Dombrádi	206

MEMBRANE PROTEINS AND TRANSPORT; INTRACELLULAR SIGNALS; CYTOKINES AND RECEPTORS

Interaction of the Wheat Endosperm Lipid-Binding Protein Puroindoline-a with Phospholipids	Christine Le Guernevé, Michel Seigneuret, and Didier Marion	179
Mechanism of the Synergistic Induction of CYP2H by Isopentanol plus Ethanol: Comparison to Glutethimide and Relation to Induction of 5-Aminolevulinate Synthase	Claudine A. Louis, Sheryl G. Wood, Heidi S. Walton, Peter R. Sinclair, and Jacqueline F. Sinclair	239

**PROTEIN STRUCTURE AND FUNCTION; PROTEASES, PROTEIN TURNOVER,
AND POST-TRANSLATIONAL PROCESSING**

Class I Heme Peroxidases: Characterization of Soybean Ascorbate Peroxidase	<i>Deborah K. Jones, David A. Dalton, Federico I. Rosell, and Emma Lloyd Raven</i>	173
Oligomeric Structure and Tissue Distribution of Ficolins from Mouse, Pig and Human	<i>Tomoo Ohashi and Harold P. Erickson</i>	223
Announcement		248
Author Index for Volume 360		249
Cumulative Author Index for Volumes 349–360		250
Cumulative Subject Index for Volumes 349–360		258

